

TEREKHOV, Yu. A., Cand Med Sci -- (diss) "Electromyographic Analysis of the Knee-~~Joint~~ Reflex ^{in the} with Elimination and Stimulation of Various Receptors." Len, 1957. 18 pp (Min of Health RSFSR, Len Sanitary-Hygienic Med Inst), 220 copies (KL, 50-57, 120)

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"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755320012-5

KORCHAGIN, V.I.; OSTROVSKIY, V.Ye.; TEREKHOV, Yu.N.

Methods of aerogeophysical prospecting for rare elements
deposits. Geol. mest. red. elem. no.20.27.62 '63.
(MIRA 17:5)

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755320012-5"

VOLCIEK, Olgerd [Wołczek, Olgerd]; TEREKHOV, Yu.P. [translator]; MARGULIS,
U.Ya., red.; IUDNIK, R.L., Fedorova, N.Ya., tskhn.red.

[Isotopes in the service of man] Izotopy na sluzhbe cheloveka.
Pod red. U.IA. Margulisa. [Translated from the Polish] Moskva,
Gos.izd-vo fiziko-matem.lit-ry, 1958. 271 p. (MIRA 12:2)
(Isotopes)

TAREKHOV YU. V.
BURGOV, N. A., TAREKHOV, Yu. V. (USSR Acad. Sci.)

"Electron-Neutrino Correlation in the β -Decay of Ra²⁴."

paper submitted at the A-U Conf. on Nuclear Reactions in "Medium and Low Energy Physics, Moscow, 19-27 Nov 57.

Terekhov Yu.V.

'USSR/Nuclear Physics - Nuclear Reactions

C-5

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 495

Author : Burgov, N.A., Terekhov, Yu.V.

Inst : -

Title : Resonant Scattering of Gamma-Rays from Mg²⁴.

Orig Pub : Atomn. energiya, 1957, 2, No 6, 514-519

Abstract : The Resonant scattering of gamma-quanta with energies $E\gamma_1 = 1.38$ Mev, corresponding to the transition of the Mg²⁴ nucleus into the ground state, by nuclei of metallic Mg, has been observed. The energy lost by the gamma-quantum ($E\gamma_1 = 1.38$ Mev) upon emission and collision with the nucleus, was compensated by the energy due to the recoil from the emission of the preceding gamma-quantum with energy $E\gamma_2 = 2.76$ Mev. With the aid of the fast-coincidence and amplitude analysis procedure, the coincidences of gamma-quanta with energies $E\gamma_1 = 1.38$ Mev and $E\gamma_2 = 2.76$ Mev were registered. Placed in the path of the gamma-

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USSR/Nuclear Physics - Nuclear Reactions

Abs Jour : Ref Zhur Fizika, No 1, 1958, 495

C-5

-quanta of 1.38 Mev were alternately scatterers of magnesium and aluminum. The source was radioactive Na²⁴ in the form of a solution of NaOH in water. With an angle of 120° between the registered gamma-quanta, there was observed in the magnesium specimen an excess attenuation of the gamma-quanta of 1.38 Mev, due to the resonant scattering. When the angle between the gamma-quanta was changed by 5°, the excess attenuation of the stream vanished. An estimate of the width of the level of 1.38 Mev for the Mg²⁴ nuclei gives a value $\pi l > 1.6 \times 10^{-4}$ Mev.

Card 2/2

AUTHORS: Burgov, N. A. , Terekhov, Yu. V. SOV/56-34-3-47/55

TITLE: The Correlation Electron-Neutrino in the β^- -Decay of Na²⁴
(Korrelatsiya elektron-neytrino pri β^- -raspade Na²⁴)

PERIODICAL: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1958,
Vol. 34, Nr 3, pp. 769 - 769 (USSR)

ABSTRACT: N. A. Burgov (Reference 1) proposed tests for the determination of the correlation of γ -rays and calculated the dependence of the additional cross section of the resonance scattering - on the angle between the registered γ -quantum in the case of the β -decay of Na²⁴. Tests on the utilization of a gaseous Na²⁴-source are actually carried out. The experimental device was, except some alterations, the same as in the work by N. A. Burgov and Yu. V. Terekhov (Reference 2). The multipliers ФЭУ-33 were used instead of the multipliers ФЭУ-19 due to which the resolving time of the coincidence-connection could be reduced to $3 \cdot 10^{-9}$ sec. Vapors of metallic sodium which also contained radioactive Na²⁴ served as

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The Correlation Electron-Neutrino in the β^- -Decay of SOV/ 56-34-3-47/55

sources for the γ -rays. This source was kept at a temperature of 1000° which corresponds to a vapor-pressure of the metallic sodium of ~ 1 atmosphere. The obtained test-results are demonstrated in a diagram. The mean value of the correlation constant, which was determined from a test series amounts to $\lambda = -0,3$. λ , is with a probability of 80 % within the limits of from 0 and -1. The measured maximum cross section of the resonance scattering at the angle 120° between the registered γ -quantum was $(3.1 \pm 0.4) \cdot 10^{-25}$ cm². The life of the level is $\sim 2 \cdot 10^{-13}$ sec. According to the estimations, the mean time between 2 collisions of the recoil nucleus in the source amounts to $\sim 10^{-17}$ sec. The recoil nuclei may therefore be considered free and the calculations carried out in the first-mentioned previous work (Reference 1) are correct. This is a translation of this brief communication. There are 1 figure and 2 references, 2 of which are Soviet.

SUBMITTED: December 20, 1957

Card 2/2

21(3)

AUTHORS:

Burgov, N. A., Terekhov, Yu. V.

SOV/56-33-4-10, 12

TITLE:

Types of Interaction in β^- -Decay. The Decay of Na^{24}
(Varianty vzaimodeystviya pri β^- -raspade. Rasplod Na^{24})

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1955,
Vol 35, Nr 4, pp 932 - 939 (USSR)

ABSTRACT:

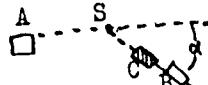
Investigation of the types of interaction in β -decay is an important task in the theory of weak interaction; with the discovery of the nonconservation of parity its importance has further increased. Investigations were already carried out of electron-neutrino correlation in He^6 (Refs 1,2) and Ne^{19} (Refs 3,4), as well as in Ar^{35} (Ref 7). (β^+ -decay responsible for Fermi-type of interaction; correlation constant $\lambda = 0.70 \pm 0.17$). In the present paper the authors investigated electron-neutrino correlation in Na^{24} β^- -decay by means of the method of nuclear resonance scattering of Mg^{24} γ -rays accompanying the β^- -decay of Na^{24} . Figure 1 shows the decay scheme

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Types of Interaction in β^- -Decay. The Decay of Na^{24}

307/56-30-4-10/12

$\text{M}_Z^A \rightarrow \text{M}_{Z+1}^A$, and figure 2 a schematical drawing of the experimental arrangement. A gaseous Na^{24} -source was used. In the drawing

 S denotes the source (M_Z^A), C the scatterer (nuclei M_{Z+1}^A), A and B are detectors the former recording γ -quanta of the energy E_{γ_1}

and B recording the γ -quanta of the energy E_{γ_2} (A and B are connected in coincidence). Besides the usual absorption of γ -quanta (caused by photoeffect, Compton effect, and formation of pairs) and additional absorption occurs in C as a consequence of the resonance scattering of γ -rays on the nuclei of the scatterer. In the following the average cross section of resonance scattering is calculated in accordance with reference 8; the values for Na^{24} are shown by a diagram (Fig 3). The curve shows the dependence $\bar{\sigma}/\sigma$ on α and attains its maximum at $\cos \alpha = E_{\gamma_2}/E_{\gamma_1}$ ($E_{\gamma_1}^{\max} = 2.76 \text{ MeV}$, $E_{\gamma_2} = 1.38 \text{ MeV}$):

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Types of

Interaction in β^- -Decay. The Decay of Na²⁴ 3W/30-11-10/14

i.e. at $\alpha = 60^\circ$. In the following chapter the authors describe the experimental order on the basis of a block scheme (Fig 4) in detail. The next chapter deals with results and with the evaluation of measuring results. Besides 4 tables showing measuring results, the experimental curve which is analogous to figure 3 is reproduced, viz. also for $\lambda = +1$, $\lambda = 0$, and $\lambda = -1$ in the coordinate $\overline{\sigma}/\sigma_{\max}$ and α . For σ_{\max} the value: $\sigma_{\max} = (1.93 \pm 0.15) \cdot 10^{-25} \text{ cm}^2$ and for λ the value $\lambda = -0.23 \pm 0.19$, and for $\tau \approx$ $= (2.6 \pm 0.2) \cdot 10^{-13} \text{ sec}$ is obtained. In the course of the discussion results dealt with by the last chapter the authors expressed the opinion that the only possible type of interaction in the β -decay of Na²⁴ is an axially-vectorial one, which corresponds to $\lambda = -1/3$. In conclusion they thank A.I.Alikhanov, Academician, K.A.Ter-Martirosyan, and V.A.Lyubimov for discussions and advise and they further expressed their gratitude to A.I.Zubkov, V.G.Alpatov, and

Card 3/4

Types of Interaction in β^- -Decay. The Decay of Na²⁴ Sov/31-32-10/58

K.N.Rostovtsev for their help in carrying out experiments. There are 5 figures, 4 tables, and 14 references, 4 of which are Soviet.

SUBMITTED: May 26, 1958

Card 4/4

NORDEN

AUTHOR: Varechlevich, N.

307 / 53-65-7/13

THE VII ANNUAL CONGRESS OF NUCLEAR SPECTROSCOPY (VII
FESTSHEGDNYYE SOVSEBCHANIYE PO YADERNYIY SPECTROSKOPII).

טומאס סטנלי וויליאם גולדמן. 1

PP. 721 - 722 (723)

ABSTRACT: The 8th Congress of Nuclear Spectroscopy took place in Moscow from 15 to 20 August 1971.

concerned from January 27 to February 7, 1958. It was attended by 100 scientists from the USSR, further by scientists from China, France, Poland, Czechoslovakia, Hungary, Bulgaria, Yugoslavia, and the Mongolian Democratic Republic. 4 main lectures and about 30 reports were heard. The main lectures dealt with problems concerning nuclear fission and β-decay, proton-proton reactions, nuclear astrophysics, internal conversion, nuclear beta-spectra, nuclear corresponding matter, and nuclear Sciences. USSR, opened the conference. Lectures were held by: T. Tu Chouhan, Ye. V. Iaspis, S. N. Fyodorov (IITZ, AS USSR) and Generalized nuclei notes [A. K. Peter University, L. A. Siliv (IITZ-Subdivision of Physical Institute)] et al. on levels in Mg^{24} , Al^{27} , Si^{28} , and Al_2O_3 . Akhiezer, A. P., Grinbergs, G. M., Gennkins, E. I., Yerushina and F. D. Landenberger (IITZ) on having found on rotational levels at $K=4$ in Cr , In, and Mn nuclei. They also reported on the discovery of vibrational γ -levels in Al_2O_3 , W , Mo , Wb —nuclei by means of the method of Coulomb (Eulon) excitation at $E_{\gamma}=1$ Mev. L.K. Peter (IATM USSR) gave a survey report: "Concerning some particularities in Vibrational Levels of Deformed Nuclei". Lectures were held also by: D. V. Zaretskii (IATM USSR) on transitions in deformed nuclei; A. S. Kharlamov (IATM USSR) on the effect of the spin $\frac{1}{2}$ on radiation dipole moments; A. T. MGD (2nd Scientific Conference) presented.

rdyakov, Moscow State University) on the level displacement and the probability of corresponding transitions in odd nuclei D.P. Zaretsky (IAE JINR - A5 USSR) - and I. - influences of the spin-orbital coupling on the evolution of the nucleus, A.I. Iaz (IAE JINR - A5 USSR) - the description of light nuclei with high neutron or proton excess; V.A. Kavun (IAP-Leningrad Polytechnic Institute) on the family of nucleon pairs in nuclei; L.M. Goldin, A. N. Matveeva, K.A. Smirnov (IAP-Leningrad Polytechnic Institute) on the

In the work of V. V. Kharitonov (BTR AF 5555) an alpha decay on rotational levels of odd nuclei V_3 , V_5 and V_7 was studied. The angular distribution of nonpolarized alpha-particles was measured. The angular distributions of the alpha-particles emitted in the beta-decay of ^{210}Po (β^- , $E_{\beta} = 106$ keV, $Q = 54.9$ MeV), ^{210}Bi (β^- , $E_{\beta} = 106$ keV, $Q = 54.9$ MeV), ^{210}Po (β^- , $E_{\beta} = 106$ keV, $Q = 54.9$ MeV) and ^{210}Po (β^- , $E_{\beta} = 106$ keV, $Q = 54.9$ MeV) on measures and γ -radiation of the (β^-) angular correlations in ^{210}Po decay were measured. V. V. Kharitonov (BTR AF 5555) also measured the intensity of the γ -radiation of the (β^-) decay of ^{210}Po on the electron gun of the BDU-Jospeh State University. The measurements of the intensities and the reactivities of longitudinal and transverse polarized alpha-particles on the bremsstrahlung of ^{208}Po (α) on the off-axis and across section of the scattering of polarized electrons and protons at $Q = 100$ MeV were carried out by V. V. Kharitonov (BTR AF 5555). The intensity of the γ -radiation of the (β^-) decay of ^{210}Po on the electron gun of the BDU-Jospeh State University was measured by V. V. Kharitonov (BTR AF 5555).

TEREKHOV, Yu. V., Candidate Phys-Math Sci (diss) -- "The resonance propagation of gamma-rays by Mg-24 and Ni-60". Moscow, 1959. 10 pp (Acad Sci USSR), 100 copies (KL, No 23, 1959, 160)

21(7)

AUTHORS:

Burgov, N. A., Terekhov, Yu. V.,
Bizina, G. Ye.

SOV/56-36-5-74/76

TITLE:

Resonance Scattering of γ -Rays on Ni⁶⁰
(Rezonansnoye rasseyaniye γ -luchey Ni⁶⁰)

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,
Vol 36, Nr 5, pp 1612-1613 (USSR)

ABSTRACT:

The resonance scattering of γ -rays on Ni⁶⁰-nuclei was investigated by means of an already previously described method (Refs 1, 2). A gaseous CoCl₂-source was used. Scintillation counters consisting of organic tolane crystals and the photomultipliers FEU-33 were used as γ -ray detectors. Recording were made of the coincidences between the emitted cascade γ -quanta; the coincidence circuit had a resolving power of $2 \cdot 10^{-9}$ sec. Before one of the detectors a nickel- and a cobalt-scatterer was alternately fitted. In the angular interval of departing γ -quanta $180^\circ > \gamma > 126^\circ$ an additional γ -absorption with an energy of 1.33 Mev was observed in the case of the nickel

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Resonance Scattering of γ -Rays on Ni⁶⁰

SOV/56-36-5-74/76

sample, which was caused by resonance scattering. This was not the case with the cobalt sample. The resonance scattering cross section was experimentally determined (in cm²) for various θ : $10^{25} \sigma_r = 3.9 \pm 1.2$ (180°); 1.7 ± 1.5 (150°); 0 ± 1.2 (90°). These values agree, within the limits of errors, with the course of the curve $\sigma_r(\theta)$, which was theoretically calculated by the authors (Ref 3). Determination of the life time of the first excited level of the Ni⁶⁰-nucleus resulted in $\tau = (1.0 \pm 0.3) \cdot 10^{-12}$ sec (in consideration of molecular bonds); this agrees well with the result obtained by Metzger (Ref 4): $\tau = (1.1 \pm 0.2) \cdot 10^{-12}$ sec and also agrees, within the error limits, with the result obtained by Alkhazov, Lemberg et al. (Ref 5), which was obtained by means of the method of Coulomb excitation: $\tau = 5.7 \cdot 10^{-13}$ sec with an error of 30 %. The above is a free translation of this "Letter to the Editor". There are 5 references, 4 of which are Soviet.

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Resonance Scattering of γ -Rays on Ni⁶⁰

SCV/56-36-5-74/76

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki
Akademii nauk SSSR (Institute of Theoretical and
Experimental Physics of the Academy of Sciences, USSR)

SUBMITTED: March 13, 1959

Card 3/3

BURGOV, N. A. and TEPEKHOV, Yu. V.

"Interaction Modes in Beta Decay. Decay of Na^{24".}
Nuclear Physics, Vol. 10, No. 5, 1959, pp. 541-551. (No. Holland Publ. Co, Amsterdam)

Electron-neutrino correlation in the β -decay of Na²⁴ has been investigated.
The method of observation is based on the effect of nuclear resonance scattering
of the γ -rays of Mg²⁴ accompanying the β -decay of Na²⁴.

A gaseous source of Na²⁴ was used.

The most probable value of the correlation constant which is in agreement with
the measurements proved equal to $\lambda = -(0.22 \pm 0.12)$.

If one takes into consideration the isobaric spin and the experiments on the
circular polarization of the γ -rays of Na²⁴, then it appears that the β -decay of
Na²⁴ is due only to interaction of the Gamow-Teller type.

It follows then from the results of the present paper that only the axial
vector mode of interaction, corresponding to $\lambda = -\frac{1}{3}$, should be effective in
the β -decay of Na²⁴.

BABIKOV, Yu. E., RABINOVICH, Yu. V., RABINOVICH, N. I.

Stability amplitude of body fluctuations as an index of the stability of the standing posture in man. Biul. eksp. biol. i med. 65 no. 3; 122-125 Ag '65.
(MIR 1970)

L. Laboratoriya klinicheskoy fiziologii (zav.- akademik AN UkrSSR
Ye.E. Babikov) Instituta normal'noy i patologicheskoy fiziologii
(dir.- deystvital'nyy chlen AMN SSSR V.V. Parin) AMN SSSR, Moscow.

TIREKHOVA, A. A.

Prof; Moscow Oblast Sci. Res. Inst. Obstetrics & Gynecology "el. 49 -".
"Use of Vsojmevslou's Method of Anesthesia in Puerperal Hysterorrhaphy,"
Akusher, i Ginekol, No. 1, 1949.

MIKHAYLOV, V.P.; TEREKHOVA, A.A.

Methods and forms of increase of qualifications of obstetrician-gyn^ecologists. Akush. gin., Moskva no.5:14-19 Sept-Oct 1952. (CLML 23:2)

1. Professors. 2. Of Moscow Oblast Scientific-Research Institute of
Obstetrics and Gynecology (Director -- O. D. Matspanova).

~~THROKHOVA, A.A.~~

Local infiltration anesthesia according to Vishnevskii's method in
surgery of cancer of the cervix uteri. Akush. gin. no.6:7-14 Nov-Dec
1953. (CIML 25:5)

1. Professor. 2. Of Moscow Oblast Scientific-Research Institute of
Obstetrics and Gynecology (Director -- O. D. Matapanova; Scientific
Supervisor -- Prof. V. P. Mikhaylov).

TEREKHOVA, A.A., professor

Mortality caused by hemorrhages in labor and methods for further
lowering its rate. Akush.i gin. no.2:44-55 Mr-Ap '55. (MLRA 8:7)

1. Glavnny akusher-ginekolog Ministerstva zdravookhraneniya RSFSR.
(LABOR, complications,
hemorrh., mortal. control)
(HEMORRHAGE,
uterus, in labor, mortal. control)
(UTERUS, hemorrhage,
in labor, mortal. control)

TEREKHOVA, A.A., professor

Results of psychoprophylactic preparation for labor in obstetric
institutions of the R.S.F.S.R. Akush. i gin. 32 no.3:22-28
My-Je '56. (MLRA 9:9)

1. Glavnnyy akusher-ginekolog Ministerstva zdravookhraneniya RSFSR
(LABOR,
painless, psychoprophylactic method, results (Rus))

MIKHAYLOV, V.P., prof.; TEREKHOVA, A.A., prof.

Thromboembolism in obstetrics and gynecology. Akush. i gin.
33 no.58-77 S-0 '57. (MIRA 12:5)

1. Iz Moskovskogo oblastnogo nauchno-issledovatel'skogo instituta
akushersatva i ginekologii (dir. O.D.Matspanova).
(THROMBOEMBOLISM, etiol. and pathogen.
gyn. dis. & labor)
(GYNECOLOGICAL DISEASES, compl.
thromboembolism)
(LABOR, compl.
same)

MIKHAYLOV, V.P., prof.; TEREKHOVA, A.A., prof.; GEVORKYAN, G.G.

Carcinoma in situ as a pathohistological and clinical problem in
the early diagnosis of cervical cancer [with summary in English].
Akush. i gin. 34 no.1:3-18 Ja-F '58. (MIRA 11:4)

1. Iz Moskovskogo oblastnogo nauchno-issledovatel'skogo instituta
akushерства i ginekologii (dir. O.D.Matsanova, nauchnyy ruko-
voditel' - prof. V.P.Mikhaylov)
(CERVIX NEOPLASMS, diag.
carcinoma in situ, early diag. value (Rus))

MIKHAYLOV, V.P., prof.; TEREKHOVA, A.A., prof.

Secondary sutures on the granulation surface of 2d and 3d degree perineal incisions in labor. Akush.i gin. no.6:82-86 '60.

1. Iz Moskovskogo oblastnogo nauchno-issledovatel'skogo instituta akusherstva i ginekologii (dir. - zasluzhennyj vrach RSFSR O.D. Maupanova, nauchnyj rukovoditel' - prof. V.P. Mikhaylov).

(MIRA 14:1)

(PERINEUM--SURGERY)

MIKHAYLOV, V.P.; TEREKHOVA, A.A.

Vishnevskii method of local infiltration anesthesia in obstetrical and gynecological operations. Akush.i gin. 36 no.4:43-53 Jl-Ag '60.
(LOCAL ANESTHESIA) (ANESTHESIA IN OBSTETRICS)
(GENITOURINARY ORGANS--SURGERY) (MITRA 13:12)

MIKHAYLOV, V. P., prof.; TEREKHOVA, A. A., prof.; GEVORKYAN, G. G.,
nauchnyy sotrudnik

Intraepithelial cancer of the cervix uteri (morphology, clinical
aspects, treatment). Akush. i gin. no.3:89-95 '61.
(MIRA 14:12)

1. Iz Moskovskogo oblastnogo nauchno-issledovatel'skogo instituta
akusherstva i ginekologii (dir. - zasluzhennyy vrach O. D.
Matspanova, nauchnyy rukoviditel' - prof. V. P. Mikhaylov)

(UTERUS--CANCER)

MIKHAYLOV, V. P., prof.; TEREKHOVA, A. A., prof.; GEVORKYAN, G. G.,
nauchnyy sotrudnik

Carcinoma in situ and carcinoids as preneoplastic stages in the
histogenesis of cancer. Akush. i gin. 38 no.3:11-21 My-Je '62.
(MIRA 15:6)

(UTERUS--CANCER)

TRUKHINA, A. F.

"The Root System of Red Clover." Cand Biol Sci, All-Union Inst of
Plant Growing, VAShNIL, Leningrad, 1953. (RZhBiol, No 1, Sep 54)

SO: Sum 432, 29 Mar 55

TEREKHOVA, A.Y.

Methods of studying the root system of red clover. Bot. zhmr. 39
no.5:744-751 S-O '54. (MLRA 7:11)
(Clover) (Roots (Botany))

BOROVITSKIY, Pavel Illarionovich; TEREKHOVA, A.P., redaktor; GURDZHIYEVA, A.M., tekhnicheskiy redaktor.

[A short handbook for the teacher of natural history] Kratkiy spravochnik prepodavatelya estestvoznaniiia. Sostavljen kollektivom avtorov. Izd. 3-e, ispr. i dop. Leningrad, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniya RSFSR, 1955. 758 p.(MLRA 8:10)
(Natural history--Handbooks, manuals, etc.)

TEREKHOVA, A.F.

Studying the root system of red clover. Bot. zhur. 41 no. 4:553-558
Ap '56. (MLRA 9:9)

Leningradskiy gosudarstvennyy universitet imeni A.A.Zhdanova.
(Clover) (Roots (Botany))

AUTHOR:

Terekhova, A.G.

SOV-115-58-4-32/45

TITLE:

The Polish Monthly Scientific and Technical Journal
"Pomiary, Automatyka, Kontrola" (Measurements, Automation,
Control) for 1957 (Pol'skiy yezhemesyachnyy nauchno-tekh-
nicheskiy zhurnal "Pomiary, automatyka, kontrola (Izme-
reniya, avtomatika, kontrol') v 1957 g.)

PERIODICAL:

Izmeritel'naya tekhnika, 1958, Nr 4, pp 90-92 (USSR)

ABSTRACT:

The article contains a review of the articles and subjects
dealt with in the 1957 issues of "Pomiary, Automatyka,
Kontrola", a Polish journal devoted to questions of meas-
urement equipment, precision mechanics, optics, automation
and technical checking of the quality of measuring equip-
ment.

1. Measurement--Instrumentation

Card 1/1

AUTHORS: Kolov, M.I., and Terekhova, A.I., Engineers SOV/133-58-11-20/25

TITLE: Thermal Treatment of Cold-rolled Dynamo Steel in Coils
(Termicheskaya obrabotka kholodnokatanoy dinamnoy stali
v rulonakh)

PERIODICAL: Stal', 1958, Nr 11, pp 1029 - 1035 (USSR) /8-

ABSTRACT: During the development of the technology of production of cold-rolled dynamo steel, a large proportion of finished sheets (up to 50%) was rejected due to high specific losses. Moreover, large metal losses were caused by corrugation of the edges and of whole sheets due to deformation of coils during heating. During sorting, a part of the sheets was rejected due to "cracks" which appeared on the strip during the cutting of coils and were caused by sticking and welding of the metal during annealing. For the above reasons, the following possibilities of improving the production technology were investigated: a) application of decarburising preliminary annealing of steel in order to decrease its specific losses; b) in view of the large deformation of strip during annealing in coils - transfer to annealing in sheets; c) introduction of dressing operation for straightening strip with subsequent secondary

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SOV/133-58-11-20/25

Thermal Treatment of Cold-rolled Dynamo Steel in Coils

annealing of coils. The first two modifications required reconstruction of some equipment and as was shown by the investigation did not produce low-texture cold-rolled steel of sufficiently high magnetic properties; therefore, the third modification was tested in detail and adapted to conditions prevailing at the works. The technology of production of dynamo steel, investigating methods and the results obtained are described. As a result of this investigation, the following practice was finally adopted. Strip of dimensions 0.5 x 700 - 780 mm rolled on a continuous five-stand mill 1200 with summary reduction of 79% is annealed in a bell-type furnace fired with a mixture of coke-oven and blast-furnace gas. A protective atmosphere of the following approximate composition is used %: CO₂ - 1, CO 3.35, H₂ 2.65, CH₄ 0.53, N₂ 92.46. The annealing temperature - 880-930°C, soaking time - 12 hours. Cooling of the charge to 650°C under the bell at a rate of 15°C/hr. In order to straighten strip, it is dressed by rolling with a reduction of 2.5 - 3.5%. After dressing, strip is again annealed at 700 - 750°C. During this annealing, no

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SOV/133-58-11-20/25

Thermal Treatment of Cold-rolled Dynamo Steel in Coils

deformation of strip takes place. The annealed strip is cut into sheets. The introduction of this practice of thermal treatment of cold-rolled dynamo steel (without the application of decarburising annealing) increased the yield of higher quality steels E12, E21 and E3 up to 70% at a silicon content within a range of 1.3-1.8%. Anisotropy of magnetic properties of the steel does not exceed 3.5%. It is stressed in the editorial note that an effort should be made to carry out the second annealing in sheets, i.e. after cutting of the strip. There are 7 figures, 4 tables and 11 references, 7 of which are Soviet, 3 German and 1 French.

ASSOCIATION: Magnitogorskiy metallurgicheskiy kombinat
(Magnitogorsk Metallurgical Combine)

Card 3/3

TSYURUPA, N.N.; TEREKHOVA, A.I.

Types of disperse systems and their classification. Zhur. fiz.
khim. 38 no.7:1770-1773 Jl '64. (MIRA 18:3)

1. Moskovskiy khimiko-tehnologicheskiy institut imeni Mendeleyeva.

RASSUDOVA, N.S.; TEREKHOVA, A.I.; LITOV, G.N.; ALEKSANDROVA, N.A.; STREL'ITSOV, I.S.;
RUBINSHTEYN, B.L.

Synthesis and investigation of the characteristics of nickel titanates
and mixed nickel-titanium pigments. Lakokras.mat. i ikh prim. no.2:
25-29 '63. (MIRA 16:4)
(Titanium) (Nickel) (Pigments)

YERSHOVA, L.P.; KOLOV, M.I.; TEREKHOVA, A.I.

Effect of metal oxidation on the properties of transformer steel.
Stal' 23 no. 3:266-269 Mr '64. (MIRA 17:5)

1. Magnitogorskiy metallurgicheskiy kombinat.

MISHARIN, A.P.; FILENIUS, V.A.; TEREKHOVA, A.L.; GROTSKIY, M.R.; GOLENYAK, L.L.;
KRUKOVER, I.M., professor, direktor.

Remote results of the intra-tonsillar method of therapy in chronic tonsillitis
and atrophic rhinopharyngolaryngitis. Vest.oto-rin. 15 no.5:48-52 S-0 '53.
(MLRA 6:11)

1. Klinika bolezney ukha, gorla i nosa Irkutskogo meditsinskogo instituta.
(Tonsils--Diseases) (Larynx--Diseases)

TEREKHOVA, G.A.

Vein rocks in mercury-antimony deposits of southern Fergana.
Uch.zap.SAIGIMS no.5:23-32 '61. (MIRA 15:11)
(Fergana--Rocks, Igneous) (Fergana--Ore deposits)

TEREKHOVA, C.A.

Zone of the secondary enrichment of the hypogenic dispersion
halo trace elements in the Kadamzhay antimony deposit. Razved.
1 okh. nedr 30 no.10.6-9 O '64. (MIRA 18:11)

1. Sredneaziatskiy nauchno-issledovatel'skiy institut geologii
i mineral'nogo syr'ya, Tashkent.

TEREKHOVA, G. I.

TEREKHOVA, G.I.

In the Presidium of the Academy of Pedagogical Sciences of the
R.S.F.S.R. Biol.v shkole no.2:95-96 Mr-Ap '57. (MLRA 10:5)
(Biology--Study and teaching)

BOBROVSKIY, S.A.; TEREKHOVA, H.M.

Consecutive pumping of petroleum products controlled by their
viscosity. Transp. i khran. nefti no.1:19-22 '63. (MIRA 16:9)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti
im. akademika Gubkina.

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755320012-5

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755320012-5"

USOL'TSEV, A.N.; TEREKHOVA, N.T.

Functional peculiarities of the cutaneous thermal analysor in infants during their first half year of life. Zhur.vys.nerv.deizt. 8 no.2; 182-192 '58. (MIRA 13:1)

1. Laboratory of Children Higher Nervous Activity Department of Development and Upbringing, Institute of Pediatrics, U.S.S.R. Academy of Medical Sciences, Moscow.

(SKIN, physiology,

thermal receptors, conditioned reflex technic of funct. tests in newborn inf. (Rus))

(INFANT, NEWBORN,

conditioned reflex technic of cutaneous thermal receptor function tests (Rus))

(TEMPERATURE, effects,

skin receptors, conditioned reflex technic of funct. tests in newborn inf. (Rus))

PAK, P B , TEREKHOVA, N.V.

Increasing the safety in conducting repair operations in
underground electrical systems with voltages exceeding 1,000
volts. Nauch. soob. VostNII no.3:120-127 '63. (MIRA 17:5)

TEREKHOVA, N.V.

Effect of leakage currents on the performance of control systems
of automatic conveyor lines with sparkproof circuits. Vop.bezop.v
ugol'.shakh. 4:233-235 '64. (MIRA 18:1)

TEREKHOVA, N.Ya.

Prevention of recurrences in patients with tuberculous lupus.
West.derm.i ven. 3 no.6:35-37 N-D '59. (MIRA 13:12)
(SKIN—TUBERCULOSIS) (ISONICOTINIC ACID)

TEREKHOVA, N. Ya.

Pathohistological changes in tuberculosis of the skin during the process of treatment with phthivazide. Probl. tub. no. 2:67-73
(MIRA 15:2)
'62.

1. Iz kafedry kozhnykh i venericheskikh bolezney (zav. - prof.
D. A. Trutnev) Voronezhskogo meditsinskogo instituta.

(SKIN—TUBERCULOSIS) (PHTHIVAZIDE)

s/153/60/003/003/020/036/xx
B0'6/B058

AUTHORS: Tronov, B. V., Terekhova, O. A.

TITLE: Complexes of Some Polyheterocyclic Amines With
Nitro-phenol Halides

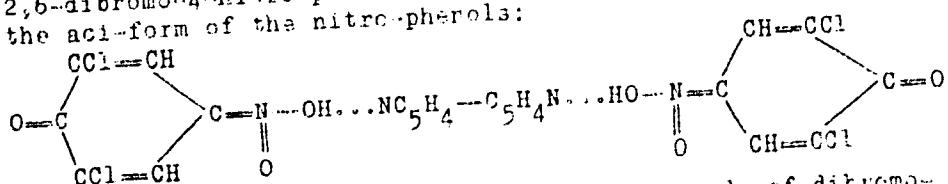
PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i
khimicheskaya tekhnologiya, 1960, Vol. 3, No. 3,
pp. 466 - 468

TEXT: The authors report on their studies of the complex formation of two isomeric (2,2'- and 4,4') dipyridyls, two (2,3'- and 6,6') di-quinoyls as well as o-phenanthroline with mono- and dihalogen derivatives of p-nitro-phenol. They obtained crystalline complex compounds for all 12 systems formed, which they divide into three groups: 1) colorless or almost colorless complexes. To these belong complexes of 2-chloro- and 2-bromo-4-nitro-phenol, in which the nitrogen of the amine is linked with the hydrogen of the phenyl-hydroxyl:
 $O_2NC_6H_3ClOH...NC_5H_4-C_5H_4...HOClC_6H_3NO_2$. 2) Lemon-yellow complexes, to

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Complexes of Some Polyheterocyclic Amines S/53/60/003/003/020/036/XX
 With Nitro-phenol Halides B016/B058

which complexes of 2,6-dichloro-4-nitro-phenol and some complexes of 2,6-dibromo-4-nitro-phenol belong, which apparently are derived from the aci-form of the nitro-phenols:



3) The brightest orange-colored or red compounds of dibromo- and diiodo-nitro-phenol have, as the authors presume, a structure of amino-nitro complexes. At an amine excess (amine:phenol = 2:1), the yellow dipyridyl complex grows red. The initial substances were used in ratios 2:1, 1:1, and 1:2. With the exception of the above mentioned case of 4,4'-dipyridyl and 2,6-dibromo-4-nitro-phenol, composition and properties of the complexes developed were independent from the quantitative relation of the two components. The authors mention papers by R. D. Glukhovskaya and N. A. Ugol'nikov (Refs. 3,4). The following students participated in the experimental part of the study:

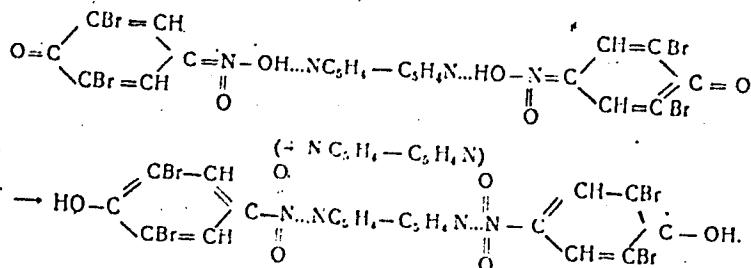
Card 2/3

Complexes of Some Polyheterocyclic Amines . S/153/60/003/003/020/036/ZK
 With Nitro-phenol Halides . B016/B058

L. M. Gerasimova, A. A. Pleskachevskaya, T. F. Baskova, and
 Z. K. Misiukova. There are 5 references: 4 Soviet and 1 German.

ASSOCIATION: Tomskiy gosudarstvennyy universitet im. V.V. Kuybysheva;
 Kafedra organicheskoy khimii (Tomsk State University
 imeni V.V. Kuybyshev; Chair of Organic Chemistry)

SUBMITTED: July 15, 1958



Card 3/3

TEREKHOVA, O.P.

Orientation reflex in conditioned motor response to compound stimuli
[with summary in English]. Vop. psichol. 4 no.1:87-96 Ja-Y '58.
(MIRA 11:3)
1. Kafedra psichologii Moskovskogo gosudarstvennogo universiteta.
(Conditioned response)

TEREKHOVA, O.P.

Generalization as one of the forms of analysis. Vop. psichol.
6 no.4:83-92 Jl-Ag '60. (MIRA 13:9)

1. Kafedra psichologii Moskovskogo gosudarstvennogo universiteta.
(Thought and thinking) (Transfer of training)

LENSKAYA, V. N.; TEREKHOVA, R. K.

Amperometric determination of sulfides in the presence of sulfates, thiosulfates, sulfites, and carbonates in alkaline wastes of petroleum refining and of phosphates in phosphate catalysts. Izv. vys. ucheb. zav.; khim. i khim. tekhn. 5 no. 5:717-721 '62. (MIRA 16:1)

1. Saratovskiy gosudarstvennyy universitet imeni N. G. Chernyshevskogo, kafedra analiticheskoy khimii.

(Sulfides) (Phosphates)
(Conductometric analysis)

TEREKHOVA, R. K.; SHISHKINA, N. N.

Quantitative determination of nitrates in alkaline solutions.
Izv. vys. ucheb. zav.; khim. i khim. tekhn. 5 no.5:848-850
'62. (MIRA 16:1)

1. Saratovskiy gosudarstvennyy universitet i Saratovskiy zavod
shchelochnykh akkumulyatorov.

(Nitrates) (Alkalies)

MUSTAFIN, I.S.; LENSKAYA, V.N.; TEREKHOVA, R.K.

Interaction between copper and chromium salts. Zhur. neorg.
khim. 8 no.10:2314-2317. O '63. (MIRA 16:10)

1. Saratovskiy gosudarstvennyy universitet im. N.G. Chernyshev-
skogo, kafedra analiticheskoy khimii.
(Copper salts) (Chromium salts)

MAGARIT, R.Z.; AKSENOVA, E.I.; TEREKHOVA, R.P.

Transformation of sulfurs compounds with the formation of carbon
on a carbon surface. Gaz. prom. 7 no.4:50-54'62 (MIRA 1787)

PANYUKOVA, M.A.; ISAKOVA, V.A.; TEREKHOVA, R.P.

Dehalogenation of iodoxybehenic acids by alkaline earth hydroxides.
Part 2. Zhur.ob.khim. 33 no.12:4002-4004 D '63. (MIRA 17:3)

1. Ural'skiy gosudarstvennyy universitet.

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755320012-5

ASD(C) 3/ESD/CY/ISW/AERB CG/2A

ACCESSION NO. AERB00152

BILIKOV, V. M.; Gol'din'skii, V. I.; Yankovskii, N. S.; Korchakov, S.

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755320012-5"

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755320012-5

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755320012-5"

TERKHOV, S. F.

(b)

Radiation-Induced Polymerization of Monomers in the Solid State

I. M. Barkov, V. I. Gol'danskii, N. S. Ermakova,
S. F. Terkhov and G. M. Trafimova

The authors investigated the kinetics of the radiation-induced polymerization of a number of vinyl monomers (acrylonitrile, methylmethacrylate, vinyl acetate, formaldehyde). The polymerization was carried out using 1.5 MeV electrons. The temperature range studied (from -196 to 0°C) included the melting point of the monomer. The temperature-dependence of the polymerization rate near the melting point changed in a variety of ways. The polymer yield in the solid phase reached a limiting value with increasing dose. The influence of phase transitions on the kinetics of polymerization was established. The results are interpreted on the basis of the theory developed and presented by N. N. Semenov at the International Symposium of Macromolecular Chemistry (Moscow, July 1960), and at the 11th Congress of Pure and Applied Chemistry (Montreal, August, 1961).

Institute of Chemical Physics of the Academy of Sciences of the USSR, Moscow

report presented at the 2nd Intl. Congress of Radiation Research,
Harrogate/Yorkshire, Gt. Brit. 5-11 Aug 1962

42706

5/20/62/147/002/016/021
B101/B186

AUTHORS: Barkalov, I. M., Gol'danskiy, V. I., Corresponding Member
AS USSR, Yenikolopov, N. S., Terekhova, S. F., Trofimova, G.M.

TITLE: Peculiarities of solid-phase radiation polymerization during
irradiation

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 2, 1962, 395-398

TEXT: To eliminate the aftereffects liable to falsify the results when the solid-phase irradiated monomer is analyzed after thawing, the radiation polymerization of acrylonitrile (AN) and of vinyl acetate (VA) was studied in an apparatus whereby thermal effects and e.p.r. signals during and after irradiation with 1.6-Mev electrons at -196° to 0°C could be recorded simultaneously. Details of procedure and analysis will be published separately (Vysokomolek. soyed., now printing). Results: With AN, the polymerization was limited below -140°C (4% polymer yield at -196°C). After repeated irradiation with 8 Mrad in each case, thawing and freezing the sample intermediately, the polymerization limit increased proportionally with the number of irradiations. At -196°C, the molecular weight dropped

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Peculiarities of solid-phase...

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with increasing dose ($8\text{-}20$ Mrad) from $\approx 3.5 \cdot 10^5$ to $\approx 7 \cdot 10^4$. After-polymerization occurred at -140 , -120 , and -90°C , but not at lower temperatures. At -90°C , the molecular weight then rose to $\approx 10^6$ within 10 hrs. The activation energy of afterpolymerization was equal to that for liquid-phase polymerization: ≈ 3 kcal/mole. The e.p.r. signals of AN remained unchanged during and after irradiation. The heat of fusion of AN samples irradiated at low temperatures remained constant within the errors of measurement: 35 ± 1 cal/g. The polymerization of AN thus proceeds at $t^\circ < -140^\circ\text{C}$ completely in solid phase, whereas slight, slow aftereffects occur at $t^\circ > -140^\circ\text{C}$. The polymerization of VA was not limited. The rate of polymerization of glassy VA was one order of magnitude higher than that of crystalline VA. The molecular weight of glassy VA (at -150°C) decreased with increasing dose from $3 \cdot 10^4$ to $7 \cdot 10^3$. The molecular weight of crystalline VA was only a fraction of that of glassy VA. Afterpolymerization did not occur. When irradiated VA was thawed, the e.p.r. signal disappeared at -129°C , the point of phase transition from glassy to crystalline state. The loss of heat in the phase transition (34 ± 1 cal/g) and the heat absorption (33 ± 2 cal/g) in melting were recorded thermographically. Thus, the polymerization of VA also occurred in

Card 2/3

Peculiarities of solid-phase...

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the solid phase. The following causes are assumed for solid-phase radiation polymerization: (a) formation of short-lived excited molecules; (b) loosening of substance along the tracks of primary particles and δ -electrons, which imparts properties to the substance similar to those that occur near phase transitions and near the melting point. There are 4 figures.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR)

SUBMITTED: August 3, 1962

Card 3/3

BARKALOV, I.M., OOLDANSKII, V.I., YENIKOLOPYAN, N.S., TROFIMOV, G.M.,
TEREKHOVA, S.F.

Radiation-induced solid-state polymerisation.
PartI..Polymerisation of acrylonitrile.
PartII..Polymerisation of vinyl acetate.
Various kinds of polymerization rate temperatures dependences.

Report submitted for the International Symposium of Macromolecular chemistry,
Paris, 1-6 July 63

"APPROVED FOR RELEASE: 07/16/2001

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APPROVED FOR RELEASE: 07/16/2001

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APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755320012-5"

L 31156-66 ENT(1)/EWT(m)/T/EWP(t)/EWA(h) IJP(c) JD/AT
ACC NR: AP6006805 SOURCE CODE: UR/0181/66/008/002/0305/0310

AUTHOR: Lisitsa, M. P.; Valakh, M. Ya.; Terekhova, S. F.

ORG: Institute of Semiconductors AN UkrSSR, Kiev (Institut poluprovodnikov AN UkrSSR)

TITLE: Effect of degeneration and Coulomb interaction between carriers on edge absorption in CdS

SOURCE: Fizika tverdogo tela, v. 8, no. 2, 1966, 305-310

TOPIC TAGS: semiconductor carrier, cadmium sulfide, single crystal, indium, crystal absorption, Coulomb interaction

ABSTRACT: The position and shape of the absorption edge in heavily doped cadmium sulfide are studied. The measurements are made in polarized light at room temperature. The resultant data are used as a basis for a model explaining edge absorption in semiconductors with a high impurity concentration. The indium dopant was added to the CdS specimens during growth to produce large single crystals with a uniform impurity distribution. Measurements of the Hall effect showed that the carrier concentration at room temperature was close to the amount of impurity added to

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L 31156-66
ACC NR: AP6006805

the crystal. Absorption curves are given for CdS single crystals with various carrier concentrations. It is found that the natural absorption edge shifts toward lower energies with an increase in carrier concentration up to $5 \cdot 10^{18} \text{ cm}^{-3}$. A further increase in the number of free electrons results in the reverse effect: the minimum energy of the direct transition E_g begins to increase. This shift in the absorption edge is attributed to two factors: the exchange interaction between charge carriers and the relationship between the Fermi energy and carrier concentration in a band. The resultant effect may be either a reduction in the threshold energy of an interband transition or an increase in this energy depending on which of these two mechanisms is predominant for a given carrier concentration. It is shown that the inversion point, i. e. the carrier concentration where the position of the absorption edge in a doped specimen is the same as in the pure metal, is determined by the parameters of the semiconductor. A reduction in the effective carrier mass and an increase in the dielectric constant of the material causes the inversion point to shift toward lower concentrations. As a result, the absorption edge for a semiconductor with a high band transconductance moves toward high energies at a concentration of the order of 10^{17} cm^{-3} . The authors are grateful to N. Ye. Korsunskaya for assistance in measuring the Hall effect. Orig. art. has: 3 figures, 11 formulas.

SUB CODE: 20/ SUBM DATE: 21Mar65/ ORIG REF: 008/ OTH REF: 011

Card 2/2 LC

"APPROVED FOR RELEASE: 07/16/2001

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APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755320012-5"

TER AMY, T. S., D.O., L. M.

1,47-Turkish Medical Inst.

"Causes of Lesions of the Heart" Article. Prof. H. M. L. M.
Mor., Chair Pathological Anatomy, -1947-: Mr., Proprietary Clinic, -194-

AVTSYN, A.P., prof.; TEREKHOVA, T.G., dotsent (Moskva)

Pathoanatomical characteristics of influenza in adults; according
to 1959 material. Arkh.pat. 23 no.4:3-14 '61. (MIRA 14:6)

1. Iz Moskovskoy klinicheskoy infektsionnoy bol'niitsy No.1
(glavnnyy vrach - zasluzhennyy vrach RFSR N.G. Galeskver).
(INFLUENZA)

TSEYDLER, S.A.; TEREKHOVA, T.G.; LANDE, F.Ya.

Meningoencephalitis in morbillous rubecula. Zhur. nevr. i psich. 65
no.7:985-988 '65. (MIRA 18:7)

l. Institut morfologii cheloveka (dir. - prof. A.P. Avtsyn) AMN SSSR
i patologoanatomicheskoye otdeleniye Moskovskoy gorodskoy klinicheskoy
infektsionnoy bol'nitsy No.7 (glavnnyy vrach N.G. Zaleskver).

TSEYDLER, S.A.; TEREKHOVA, T.G.; VIL'SHTEYN, R.M. (Moskva)

Sulfonamide bullous erythema simulating Stevens-Johnson syndrome.
Arkh. pat. no.10:46-50 '64. (MIRA 18:10)

1. Institut morfologii cheloveka (dir.- chler-korrespondent
AMN SSSR prof. A.P. Avtysyn) AMN SSSR i patologoanatomicheskoye
otdeleniye Moskovskoy gorodskoy klinicheskoy infektsionnoy
bol'nitsy No.7 (glavnnyy vrach N.G. Zaleskver).

TEREKHOVA, T.P.

TEREKHOVA, T.P.: "Individual peculiarities in the thought processes of pupils while learning historical facts". Moscow, 1955. Academy of Pedagogical Science RSFSR, Sci Res Inst of Psychology. (Dissertations for the Degree of Candidate of Pedagogical Sciences).

so: Knizhnaya letopis' No 44, 29 October 1955. Moscow.

SPERANSKAYA, Ye.I.; SKORIKOV, V.M.; RODE, Ye.Ya.; TEREKHOVA, V.A.

Phase diagram of the system bismuth oxide - ferric oxide. Izv.
AN SSSR. Ser. khim. no.5:905-906 '65. (MIRA 18:5)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova
AN SSSR.

15-8101

2109, 2209 only

S/183/60/000/004/002/C05
B004/B058

6L341

AUTHORS:

Terekhova, G. M., Petukhov, B. V.

TITLE:

Blocking of the End Groups of Polyethylene Terephthalate
by Means of o-Phosphoric Acid

PERIODICAL: Khimicheskiye volokna, 1960, No. 4, pp. 8 - 10

TEXT: The Lavsan fiber (polyethylene terephthalate), obtained by the reaction of dimethyl terephthalate with ethylene glycol, takes on a yellow color at the high polycondensation temperature (275-280°C) owing to oxidation and thermal destruction of the end groups, predominantly the hydroxyl groups. The authors report on experiments to block these end groups by means of ortho-phosphoric acid. The polycondensation took place at 1-2 torr. The phosphoric acid was added as 15% solution in ethylene glycol at various times of the process. Fig. 1 shows that too high additions of phosphoric acid retard polycondensation. Moreover, the molecular weight of the end product is reduced, as can be seen from Fig. 2, in which the viscosity reduction under the effect of the concentration of phosphoric acid is illustrated. An addition of 0.01% of

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84341

Blocking of the End Groups of Polyethylene Terephthalate by Means of o-Phosphoric Acid S/183/60/000/004/002/005
B004/B058

phosphoric acid related to dimethylene terephthalate is sufficient to obtain a purely white fiber. Viscosity and molecular weight are not yet greatly affected thereby. Fig. 3 shows the influence of the point of time at which phosphoric acid is added. Too early an addition retards polycondensation. It is recommended to add phosphoric acid once the polycondensation process has already reached 50-75%. As shown in Fig. 4, the thermal stability of the fiber increases through addition of phosphoric acid (content of carboxyl groups with and without addition of phosphoric acid). An addition of phosphoric acid close to the end of polycondensation does not definitely prevent yellow coloring, but it leads to high thermal stability, as can be seen from Fig. 5 (viscosity reduction between 270-290°C becomes smaller). There are 5 figures and 6 references: 3 Soviet, 1 US, and 2 British.

ASSOCIATION: VNIIV (All-Union Scientific Research Institute of Synthetic Fibers)

Card 2/2

PETUKHOV, B.V.; TEREKHOVA, G.M.

Effect of polyesterification catalysts on side processes during
the synthesis of lavsan. Khim.volok. no.5:24-27 '61.
(MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo
volokna.
(Esterification) (Catalysts) (Lavsan)

5.3833

39849
S/190/62/004/008/008/016
B101/B180

AUTHORS:

Mikhaylov, N. V., Tokareva, L. G., Buravchenko, K. K.,
Terekhova, G. M., Kirpichnikov, P. A.

TITLE:

Stabilization of polyethylene terephthalate melts

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 8, 1962,
1186-1192TEXT: In this fifth report on the ageing of synthetic fibers, the authors studied the thermooxidative decomposition of polyethylene terephthalate (PET) (initial intrinsic viscosity $[\eta] = 0.245$; after reprecipitation $[\eta] = 0.256$) at 170 - 220°C (methods see Kolloidn. zh., 16, 576, 1956) and their inhibition by esters of phosphorous acid.Results: (1) Heating to 220°C in air shows no change in $[\eta]$. When heated in air, $[\eta]$ decreased more slowly than without. It is therefore assumed that thermooxidative processes occur with the formation of COH and COOH groups and destruction of the ester bond. The PET fiber Lavsan behaved similarly: initial breaking

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S/190/62/004/008/008/016
B101/B180

Stabilization of polyethylene ...

strength (kg/mm^2) = 42.8; after 4 hrs at 170°C in N_2 , 41.0 and at 210°C in N_2 , 36.5; after 4 hrs at 170°C in air, 39.5, and at 210°C , 14.2.

(2) Triphenyl phosphite (I), tri-p-octyl-phenyl phosphite (II), tri-p-dodecyl phenyl phosphite (III), and tri-p-tert-butyl phenyl phosphite (IV) inhibit the thermal decomposition of PET, and increase its molecular weight and stability. The best moment for adding the inhibitor is at 50-70% polycondensation of PET. (3) After 2 hrs at 220°C the breaking strength of PET without inhibitor was 47% the initial value 71% with I, 66% with II, 78% with III, and 75% with IV. The longest induction period and smallest loss in molecular weight were found with IV. The inhibiting effect of phosphites is attributed to the fact that they hydrolyze much more easily than PET which is thus protected against hydrolysis. There are 6 figures and 4 tables. The most important English-language reference is: J. M. Ward, Nature, 80, 141, 142, 1957. X

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut
iskusstvennogo volokna (All-Union Scientific Research
Institute of Synthetic Fibers)

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"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755320012-5

Stabilization of polyethylene ...

S/190/62/004/008/008/016
B101/B180

SUBMITTED: May 8, 1961

X

Card 3/3

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755320012-5"

Author: Khokhlov, G. M.

TITLE: Method of determining phosphorus in polymers and their fibers

SOURCE: Khimicheskiye volokna, no. 4, 1963, 66-67

TOPIC TYPE: colorimetry, P, polyester, polyamide, ammonium molybdate, MoP complex, ferrous iron, absorbance

ABSTRACT: The colorimetric method developed for determining P in polymers (including P-containing heterochain polymers such as polyesters and polyamides) can be used with P concentrations as low as 10^{-3} mg./l. with an accuracy of 0.1%. Ammonium molybdate is used to form an MoP complex which is reduced with ferrous iron released from $\text{NH}_4\text{Fe}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$ by the presence of Na_2SO_3 . Orig. art. has: 1 figura, 2 formulas.

ASSOCIATION: VNIIV (All-union scientific research institute of synthetic fibers).

SUBMITTED: 11 Dec 63

DATE ACQ: 20 Aug 63

ENCL: 00

SUB CODE: MA, EL

NO REF Sov: 003

OTHER: 007

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CIA-RDP86-00513R001755320012-5"

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755320012-5

SOURCE: Khimicheskiye volokna, no. 4, 1904, 33-35

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CIA-RDP86-00513R001755320012-5"

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CIA-RDP86-00513R001755320012-5

ACCESSION NR: AP4042738

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CIA-RDP86-00513R001755320012-5"

KOVALEV, Mikhail Prokhorovich; MORZHAKOV, Sergey Petrovich; TEREKHOVA,
Klavdiya Sergeyevna; PETROV, G.N., kand.tekhn.nauk, dotsent,
retsenzent; GURTSUIEVA, N.A., red.; NOVIK, A.Ya., tekhn.red.

[Dynamic balancing of the wheels of gyro systems] Dinamicheskoe
uravnoveshivanie rotorov giroskopicheskikh sistem. Moskva,
Oborongiz, 1962. 257 p.
(Balancing of machinery) (Gyroscope)

KOVALEV, Mikhail Prokhorovich; MORZHIakov, Sergey Petrovich;
TEREKHOVA, Klavdiya Sergeyevna; PETROV, G.N., doktor
tekhn. nauk, retsenzent; KOLOSOV, M.A., inzh., red.

[Dynamic and static balancing of gyroscopic devices]
Dinamicheskoe i staticheskoe uravnenoveshivanie giro-
skopicheskikh ustroistv. Moskva, Mashinostroenie, 1965.
(MIRA 18:11)
303 p.

L 12801-66 ENT(d)/FSS-2/EEC(k)-2/EWP(v)/EWP(k)/EWP(h)/EWA(c)/EWP(l)/ETC(m) PC/NW
ACC NR. AT6001707 SOURCE CODE: UR/0000/65/000/000/0255/2057

AUTHOR: Terekhova, K. S. 41

ORG: none B+ /

TITLE: Some problems of balancing gyroscope rotors 1,44,5

SOURCE: Uravnoveshivaniye mashin i priborov (Balancing of machinery and instruments). Moscow, Izd-vo Mashinostroyeniye, 1965, 255-257

TOPIC TAGS: gyroscope, gyrorotor, gyrorotor balancing

ABSTRACT: The accuracy of modern precision- and floating-type gyroscopes used in inertial guidance systems is high. A further increase in gyroscope accuracy can be accomplished in two ways: by improving gyroscope manufacture and design, and by developing better gyroscopes, based on new operating principles. The article describes some problems connected with increasing the accuracy of the balancing of gyrorotors, and a number of difficulties encountered in this process. The main problem is the balancing of the small synchronous gyromotors with miniature bearings, in which, in addition to the usual vibrations caused by bearings, there exist vibrations due to magnetic forces. The balancing of the rotor in such cases can be accomplished only during run-out when the power supply is cut off. The accuracy of such balancing is limited by vibration due to the magnetic force, caused by the asymmetrical position of the rotor in the stator magnetic field. To increase the accuracy of balancing the synchronous rotors in small gyromotors, a special inter-

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ACC NR: AT6001707

mittent three-phase power supply is proposed, from which the vibration caused by the magnetic field can be filtered out. For mass production of precision gyroscopes, automatic balancing machines with a calibrated boring in the unbalanced part, and devices using new physical methods for compensating for the imbalance in the rotor during its spin in the balancing machine should be used. Of particular interest is a specially designed rotor with rings, filled with low-melting metal. inserts. Such a design eliminates the necessity of removing the metal. The pre-heated rotor spins, and the liquid metal contained in the rings assumes a balanced position under the effect of the centrifugal forces. The metal is then cooled, retaining its balanced position.

[AV]

SUB CODE: 17/ SUBM DATE: 04Sep65/ ATD FRESS: 4178

Card 2/1

ACC NR: AT6001710 IJP(o) WJ/EM/GS

SOURCE CODE: UR/0000/65/000/000/0304/0317

AUTHORS: Terekhova, K. S.; Nikitina, V. N.

ORG: none

TITLE: Industrial testing and calibration of balancing machines for precision devices
SOURCE: Uravnoveshivaniye mashin i priborov (Balancing of machinery and instruments).
Moscow, Izd-vo Mashinostroyeniye, 1965, 304-317

TOPIC TAGS: balancing machine, rotor balancing, instrument calibration equipment,
vibration damping, turbine rotor

ABSTRACT: Since the accuracy of balancing of precision rotors depends on the accuracy
of the balancing machine, the testing and calibration procedures for balancing machines
are qualitatively discussed. Great care must be taken in the preparation of at least
four types of calibration rotors: one rotor each of minimum and maximum weight assembled in their
in a balancing frame; one rotor each of minimum and maximum weight assembled in their
supports and mounted in a balancing frame. Equally spaced threaded holes (4 or 8)
should be provided in each balancing plane for precisely weighed (0.1 mg) calibration
weights. The following tests should be performed and their results recorded in the
machine manual (each is briefly and qualitatively discussed): a) decoupling of mutual
effects of balancing planes (1/30 attenuation is considered satisfactory); b) scale
division and discrepancy of the two supports over full range of unbalances;

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ACC NR: AT6001710

c) sensitivity threshold; d) resolution (at least between g and 1.2 g where g = permissible unbalance); e) linearity of scale (at least 5% of maximum reading over full range); f) angular location of unbalance (must be accurate to $\pm 3^\circ$); g) filter effectiveness of tuned amplifiers (measure: $Q = 2(f_o - f)/f_o$ where $f =$ frequency corresponding to 0.707 of resonance amplitude; $Q = 20-30$ is acceptable); h) amplitude-frequency response of tuned amplifiers; i) amplitude-frequency response of mechanical system; j) damping of mechanical system; k) stability and repeatability of readings; l) effects of power variations; m) rotor drive range and stability. It is suggested that the machine be recalibrated for each new rotor configuration tested and that all calibration results must be recorded and certified. Orig. art. has: 3 tables.

SUB CODE: 13/ SUBM DATE: 04Sep65/ ORIG REF: 003/ OTH REF: 004

turbine rotor
23, 44, 55

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